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(FILE 'HOME' ENTERED AT 14:38:48 ON 15 JAN 2003)

FILE 'CA' ENTERED AT 14:38:56 ON 15 JAN 2003

L1 515259 S SILICA OR SILICATE
L2 68434 S L1 AND (COAT? OR COATING?)
L3 429 S L2 AND (MOLE(W) RATIO OR MOLAR(W) RATIO)
L4 52 S L3 AND ZINC
L5 0 S L3 AND NANOMETER?

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L4 ANSWER 2 OF 52 CA COPYRIGHT 2003 ACS
 AN 136:249134 CA
 TI Primer **coating** of steel
 IN Davies, Gerald Howard; Jackson, Paul Anthony
 PA Akzo Nobel N.V., Neth.
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09D005-00
 ICS C09D001-00; C09D005-10
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 FAN.CNT 1

Inventor /
Applicants

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002022746	A1	20020321	WO 2001-EP10635	20010913
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002010505	A5	20020326	AU 2002-10505	20010913
PRAI	EP 2000-307988	A	20000913		
	WO 2001-EP10635	W	20010913		
AB	A process for primer coating a steel substrate comprises coating the substrate with a primer coating comprising a silica binder, wherein the binder comprises an aq. silica sol having a SiO ₂ /M ₂ O mole ratio , wherein M represents the total of alkali metal and ammonium ions, of at least 6:1, and, after the primer coating has dried to the extent that it is touch dry, immersing the coated substrate in water or alternatively kept in an atm. with a relative humidity of at least 50%.				
ST	primer coating process steel substrate; silica sol				
IT	primer coating				
IT	Coating process				
	Primers (paints)				
	(primer coating process for steel substrates)				
IT	Styrene-butadie				

L4 ANSWER 3 OF 52 CA COPYRIGHT 2003 ACS
 AN 136:249133 CA
 TI Primer **coating** of steel
 IN Davies, Gerald Howard; Greenwood, Peter Harry Johan; Jackson, Paul Anthony
 PA Akzo Nobel N.V., Neth.
 SO PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09D005-00
 ICS C09D001-00; C09D005-10
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002022745	A1	20020321	WO 2001-EP10552	20010911
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,				
	RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,				
	UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2001093810	A5	20020326	AU 2001-93810	20010911
PRAI	EP 2000-307957	A	20000913		
	WO 2001-EP10552	W	20010911		

AB In a process for primer **coating** steel which is intended to be fabricated and overcoated, steel is primer **coated** with a primer **coating** comprising a **silica** binder, wherein the binder comprises alumina-stabilized aq. **silica** sol and, optionally, a minor amt. of alkali metal **silicate**. The binder has a SiO₂/M₂O **mole ratio**, wherein M represents the total of alkali metal and ammonium ions, of

L4 ANSWER 7 OF 52 CA COPYRIGHT 2003 ACS
 AN 133:255429 CA
 TI Pigmented **silicate** primer **coating** suitable for
 protection of massive steel parts in storage.
 IN Davies, Gerald Howard; Jackson, Paul Anthony; McCormack, Peter Joseph
 PA International Coatings Ltd., UK
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09D001-02
 CC 55-6 (Ferrous Metals and Alloys)
 Section cross-reference(s): 42

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000055260	A1	20000921	WO 2000-EP2473	20000317
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1179035	A1	20020213	EP 2000-916986	20000317
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002539317	T2	20021119	JP 2000-605682	20000317
	NO 2001004511	A	20011105	NO 2001-4511	20010917
PRAI	EP 1999-302127	A	19990318		
	WO 2000-EP2473	W	20000317		
AB	The primer coating suitable for steel substrates (esp. in fabrication of large parts with top coating) contains: (a) Zn, Zn-alloy, or oxide-type powder as protective pigment filler; (b) aq. binder as the SiO ₂ sol (size .ltoreq.10 nm), or alkali-metal silicate having the SiO ₂ :M ₂ O mole ratio .gtoreq.6:1, with M as the total of alkali metal and NH ₄ ions; (c) silane coupling agent; and (d) optional org. resin for hardening the coating , and/or a pot-life extender. The aq. primer mixt. typically contains 20-40% solids by vol., with the Zn or Zn-alloy powder filler at 10-90% by vol. of dry film. The applied film is optionally dried, and treated with a hardening soln. by spraying. The typical mixt. for primer coating contains aq. SiO ₂ sol 27.3, water 15.8, Zn dust 48.2, Al silicate extender 8.6, and thixotropic bentonite clay 0.2% by wt. The dried primer coating on steel panels was 15-20 .mu.m thick, and could be hardened by spraying with aq. 5 wt.% ZnSO ₄ .				
ST	steel coating silicate primer zinc pigment;				
IT	silica sol primer coating steel storage Bentonite, uses				